

## **Streptococcus Group B**

*Invasive disease caused by Streptococcus Group B is a Class C Disease Condition and must be reported to the state within five business days.*

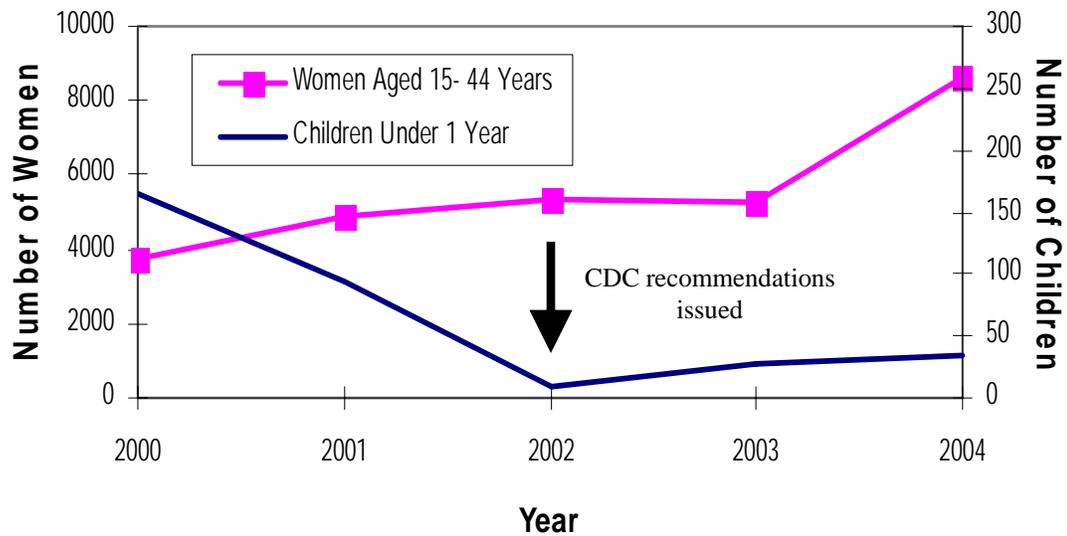
*Streptococcus agalactiae* is the only bacteria in the Group B Streptococcus (GBS) classification. GBS is associated with several diseases, most of which affect neonates and older adults. GBS is also extremely prevalent in the general population; ten to thirty percent of pregnant women are colonized by GBS. (A colonized person carries the bacteria but does not suffer any ill effects from it.) Although antibiotic treatment against Streptococcus Group B bacteria is highly successful, each year these bacteria cause serious infections and even death. GBS cause disease in about 18,000 people in the United States each year. Of these, about 8,000 are newborns. Group B strep is the most common cause of blood infections and meningitis in newborns and is a frequent cause of newborn pneumonia.

### **GBS Colonization of Pregnant Women and Neonatal Disease**

Group B streptococci are common inhabitants of the gastrointestinal and genitourinary tract. Less commonly, they colonize the pharynx. Recent literature estimates that between fifteen percent and forty percent of pregnant women are carriers of GBS. If a woman is carrying group B strep during pregnancy, she can transmit the bacteria to her child shortly before or during delivery. After delivery, person to person transmission can occur, resulting in early onset group B strep disease. Less commonly, an infant can acquire GBS in the community from other colonized persons, resulting in late-onset disease. The incidence of GBS disease declines dramatically after three months of age, but up to ten percent of pediatric cases occur beyond early infancy. Many, but not all of these, are in infants who were born pre-term.

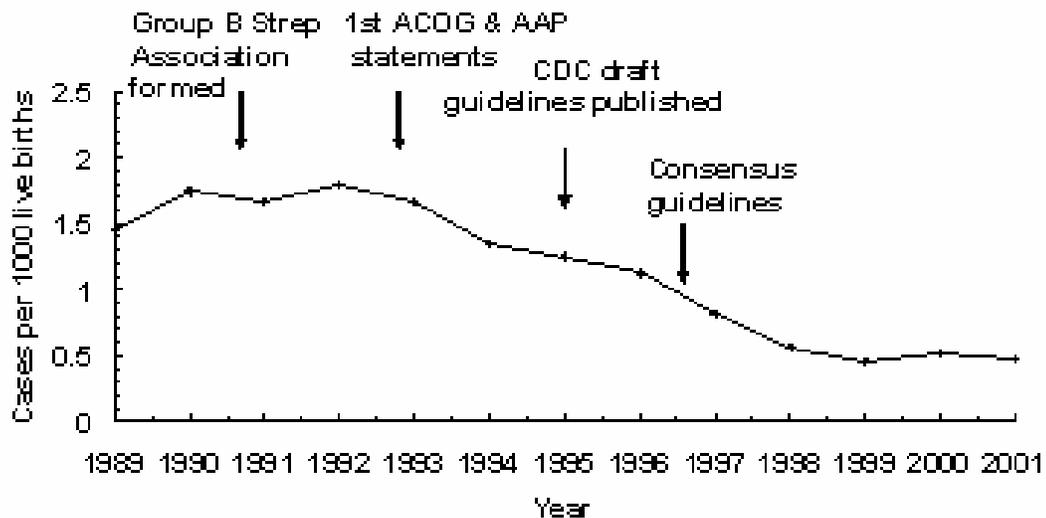
In August 2002, the U.S. Centers for Disease Control and Prevention (CDC) updated recommendations on the prevention of the type of GBS infection that occurs in babies shortly after birth. These guidelines advise health care providers to use a screening-based approach to decide which women may benefit from getting an antibiotic (e.g. penicillin) through the vein during delivery. In the years since 2002, the number of newborns diagnosed with GBS has plummeted while the number of women of child-bearing age diagnosed as carriers, has increased. (Figure 1)

Figure 1: The number of hospitalized women aged 15-44 and the number of newborns diagnosed with GBS - Louisiana, 2000- 2004



National rates of GBS disease in newborns have fallen over the last decade as public health agencies have issued recommendations for screening of pregnant women. (Figure 2)

Figure 2: Incidence of early onset invasive group B streptococcal disease United States, 1989-2001 (courtesy of CDC)



As expected, male and female newborns are diagnosed with group B streptococcal infections at the same rates. After the first years of life, however, the number of GBS diagnoses becomes heavily skewed towards females as they become older. This is because females are routinely screened during pregnancy. (Figure 3)

Figure 3: The average number of hospitalized persons diagnosed with Group B streptococcus by sex and age - Louisiana, 1999- 2004



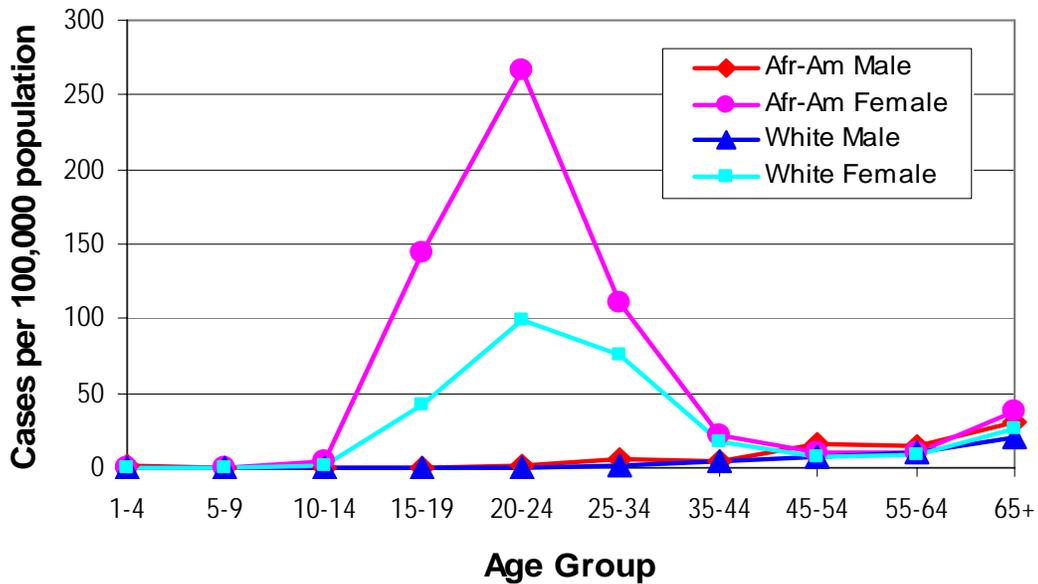
From 2000 to 2004, a total of 497 neonates were diagnosed with GBS infections in Louisiana. Of these, one died and three were stillborn. Nationally, the CDC estimates that approximately eighty infants die each year of early onset Group B Streptococcal disease.

### Other Streptococcus Group B Infections

Group B streptococcus can also cause systemic infections in non-pregnant adults with conditions such as diabetes mellitus, chronic liver or renal disease, malignancy or other immunocompromising conditions and in adults sixty-five years of age and older. In general, these infections are easily treated with antibiotics and are rarely life threatening.

From ages newborn to one year, Whites have slightly higher rates of Streptococcal disease. For all other age groups, rates of disease due to Streptococcus group B are higher among African-Americans. Rates peak for all races from fifteen to thirty-five years of age, due to increased screening among pregnant women. Incidence among African-American women aged twenty to twenty-four years is almost three times higher than that among White women of the same age. (Figure 4)

Figure 4: Average incidence rates of persons hospitalized with Streptococcal group B pneumonia and other streptococcal infections, Louisiana 1999-2004



Disease caused by Streptococcus Group B does not exhibit seasonality (data not shown).

From 1999 to 2004, a total of forty-three deaths among hospitalized persons were attributed to Streptococcal disease. All but two of these deaths occurred in adults over the age of sixty years.